

**NATIONAL NETWORK OF LIBRARIES OF MEDICINE
REQUEST FOR PROPOSALS**

ACCESS TO ELECTRONIC HEALTH INFORMATION

**Online Sound Recordings
of Health Information in Many Languages**

**Spencer S. Eccles Health Sciences Library
University of Utah
Salt Lake City, UT**

Principal Investigators

**T. Elizabeth Workman, M.L.I.S.
Clinical Librarian
Hope Fox Eccles Health Sciences Library
4037 University Hospital
50 North Medical Drive
Salt Lake City, UT 84132
voice (801) 581-4686
fax (801) 581-3632
lworkman@lib.med.utah.edu**

**Nancy Lombardo, M.L.S.
Systems Librarian
Spencer S. Eccles Health Sciences Library
10 North Medical Drive
Salt Lake City, UT 84112
voice (801) 581-5241
fax (801) 581-3632
nlombardo@lib.med.utah.edu**

**Online Sound Recordings
of Health Information in Many Languages**

**CHECKLIST OF MANDATORY QUALIFICATION CRITERIA
FOR THE LEAD INSTITUTION**

RFP: Access to Electronic Health Information

Institution Name: Spencer S. Eccles Health Sciences Library – University of Utah
Library's LIBID (if applicable): UTUUTA

Please fill in or check the appropriate answer to each of the following statements.

1. The institution is an NN/LM member.

YES X NO

2. The institution:

(a) is a DOCLINE participant

YES X NO

OR

(b) has submitted an application to become a DOCLINE participant

YES NO

OR

(c) is a LOANSOME DOC participant in order to provide document delivery service to the targeted population for the duration of the project.

YES NO

3. The total amount being requested does not exceed:

a) \$10,000 (including indirect cost) for a Single Institution

YES X NO

OR

b) \$40,000 (including indirect cost) for a Group of Institutions

YES NO

Abstract

The proposed project would provide online audio access to many health brochures in many different languages. Project staff would locate qualified narrators to read aloud approximately 200 multilingual health publications already available online in a visual, pdf format. These 200 pdf documents are available through the 24 Languages Project (<http://medstat.med.utah.edu/24languages>). These readings would be recorded, digitized, and prepared for Web-based availability, adjacent to the existing pdf documents. Listeners would access the recordings through the project's Website. The project would benefit from substantial existing publicity for the pdf documents, in addition to training and promotional outreach to many institutions. The project's expected outcome would be access to health information for the visually impaired and individuals with literacy deficits in English or a native language, both regionally and worldwide. It would provide previously inaccessible information to a very large audience. Ongoing evaluation would include feedback gained through an online survey and through direct contact with community groups, librarians, and public health workers. Web-use statistics would also serve as an evaluation tool.

Introduction and Background

In Fall of 2000, the Spencer S. Eccles Health Sciences Library and the Utah Department of Health began a collaborative effort to address the health information needs of non-English speaking people. The Department's Bureau of Primary Care, Rural and Ethnic Health contributed a collection of health education brochures in 24 different languages to this endeavor (see appendix I for list of languages), and the library proposed to complete the work of digitizing these brochures and making them available through the Internet. The Institute of Museum and Library Services provided funding in the form of an LSTA mini-grant to pay for equipment, promotional materials and the man-hours needed to complete the project. The library completed the work and established a Website at <http://medlib.med.utah.edu/24languages/> as a point of access for the brochures in a pdf format.

This Website provides visual access to multilingual health information, but currently does not serve the visually disabled, reading-challenged, and others who need such information in an audio format. The Website provides visual access to approximately 200 health information brochures. It would serve a significantly larger population if it included sound recordings for selected brochures. Web site analysis shows increased usage of the 24 Languages site. In the year 2001, usage increased 648% from initial launch. The site has garnered local media attention. A segment prepared by KSL TV, the local NBC affiliate, aired in San Francisco as well as in Utah.



Figure 1 – 24 Languages Web Site

Eccles Health Sciences Library Electronic Resource and Service Innovation

The Spencer S. Eccles Health Sciences Library at the University of Utah has a long history of leadership and innovation in the electronic information and computer based learning arenas. In 1986, Suzanne Stensaas, Ph.D. initiated the Slice of Life project, which resulted in seven editions of a videodisc containing repurposeable images contributed by health sciences faculty all over the world. Since that time, Slice of Life has gained a very high visibility among health sciences educators. The annual Slice of Life Workshop (<http://www.slice.gsm.com/>, Figure 2) offers participants a chance to share their innovative development efforts and network with one another.



Figure 2– Slice of Life 2002

In 1994, Sharon Dennis launched the library's first Web site, one of the very first health sciences library Web sites to be publicly accessible on the Internet. Today, the library Web site receives more than 150,000 visits and approximately 4,000,000 hits per week.

In 1995, Sharon Dennis and Suzanne Stensaas created the Knowledge Weavers Project (<http://weavernt.med.utah.edu/kw/>, Figure 3), funded by the National Library of Medicine from 1995 – 2002. The mission of the Knowledge Weavers project is to work with faculty to create innovative computer-based learning materials for health sciences education. Susan Roberts, Project Manager, is responsible for supervising multimedia designers and programmers as well as directing workflow for the projects.



Figure 3– Knowledge Weavers Web site

In 1996, Nancy Lombardo developed and coordinated the launch of the first fully online course in the state of Utah, the Internet Navigator (<http://www-navigator.utah.edu/>). The course was developed by a team of librarians from every academic institution in the state. Initially designed as an introduction to the Internet, the course has evolved into an interactive information literacy course focusing on college level research and life long learning skills. Nancy Lombardo serves as Chair of the Utah Academic Library Consortium Task Force charged with updating and improving the Web based course. More than 2000 Utah students will complete the course this year. The course is offered at many academic institutions in Utah, as well as institutions in New York, Michigan, Australia, and Hong Kong. (Figure 4) The site received nearly 600,000 hits last year from more than 143,000 individual visitors.



Figure 4 – Internet Navigator Course

The Eccles Health Sciences Library has been working with digital video since January 2000. The library's Digital Video Studio, managed by Nancy Lombardo, consists of hardware and software for providing live video broadcasts over the Internet, for capturing video from a wide range of media and performing digital editing and compression, and for serving streaming and progressive download video in the major video formats (RealMedia, QuickTime and Windows Media). The library has worked with Dr. Kathleen Digre, Professor of Neurology and Ophthalmology, University of Utah, to digitize her collection of videotaped neuro-ophthalmologic disorders and examination techniques. (<http://medlib.med.utah.edu/neuroophth>) In addition, the library produced a CD-ROM supplement to Dr. Digre's textbook, "Practical Viewing of the Optic Disc", (Figure 5) which included digital video, slides, animations and drawings.

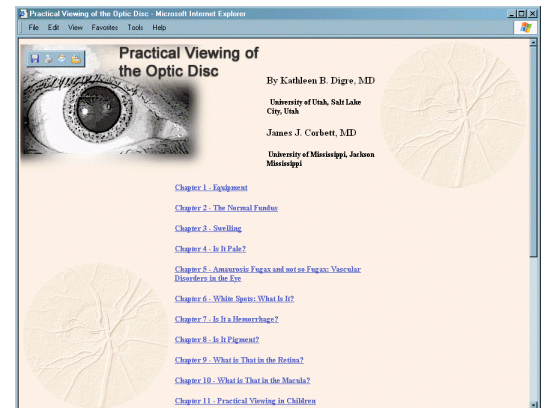


Figure 5 - CD-ROM supplement to the textbook, "Practical Viewing of the Optic Disc"

In 2002, Nancy Lombardo, as manager of the Eccles Health Sciences Library video studio, coordinated the production of the computer based Patient Education Workshop (Figure 6). The project converted a six-hour live patient education workshop developed by Jackie A. Smith, Ph. D., University of Utah College of Nursing, to an interactive online tutorial in modular format. The program incorporates digital video, audio, and interactive exercises into a Web format. The program has been distributed to 35 hospitals and medical centers for beta testing. A training workshop will be presented at the Health Care Education Association Conference in New Orleans, Louisiana in October 2002.



Figure 6 – Patient Education Workshop

Digital video and audio projects at the library cover a wide array of subject areas. The library routinely provides live broadcasting services for seminars, special events, lectures and courses in the curriculum. The library has numerous video servers with large disk arrays storing collections of digital video for on-demand viewing. Projects have been completed in collaboration with the University of Utah colleges and departments including Medical Informatics, College of Nursing, Family and Preventative Medicine, Neurology, and the Huntsman General Clinical Research Center. In addition, the library has developed video projects in collaboration with the Utah State Department of Health, Physicians for a National Health Program and the Utah Library Association. A selected list of projects can be found at <http://medlib.med.utah.edu/library/edumaterials/videoresources.html> (Figure 7).

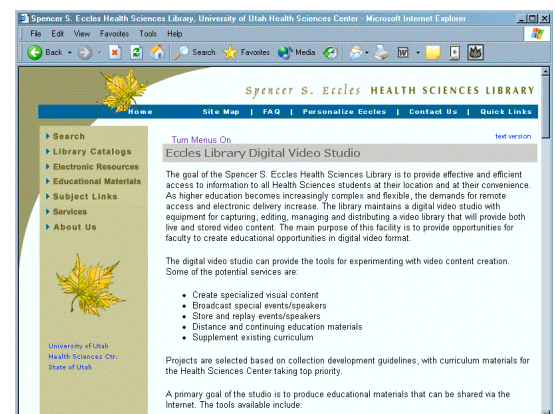


Figure 7 – Eccles Library Video Resources

Elizabeth Workman has been with the Eccles Health Sciences Library since 1999 and has contributed a number of notable electronic resources to the library's collection of services. In 1999, Liz created the Utah Consumer Health Information Network (UCHIN, See Figure 8), a Web based consumer information gateway to the highest quality electronic resources. The site leads consumers to information on specific diseases, general health information, local and national health resources. UCHIN was one of the first online resources to combine pre-evaluated health information with local community services. The site receives more than 5000 hits from 860 unique visitors each month. The URL for the site is <http://uchin.med.utah.edu>.

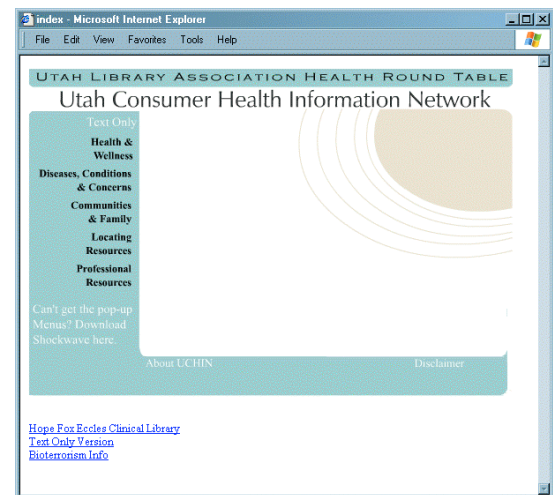


Figure 8 – UCHIN Web Site

Elizabeth Workman has worked in collaboration with the University of Utah Health Sciences Center (UUHSC) as editor, do quality controller and to customize a collection of Web based consumer health information documents in both English and Spanish. The collection serves as the primary patient health information resource on the UUHSC Web site and provides both adult and pediatric health information. This project has involved recruiting and coordinating a group of qualified faculty to review and edit the material to fit the services of the University of Utah hospital and clinics. This site receives 55,000 page views per week. MedlinePlus refers its visitors to many of the sections contained in this collection (for example, please note the General/Overview link addressing acquired brain injury at <http://www.nlm.nih.gov/medlineplus/headandbraininjuries.html>, and the many "Centro de Ciencias de la Salud, Universidad de UTAH" links found at <http://www.nlm.nih.gov/medlineplus/spanish/prostatediseases.html>). The UUHSC Website consumer health information is at <http://www.hsc.utah.edu/uuhsc/health/>.

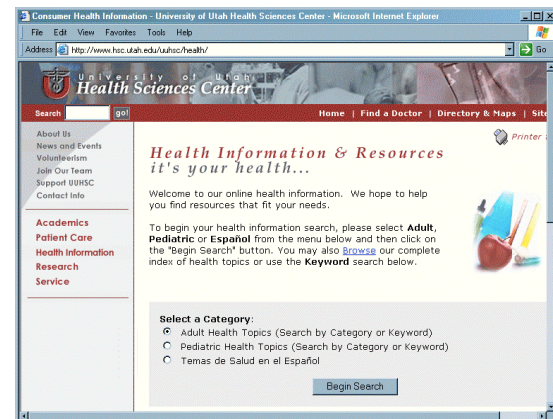


Figure 9 – UUHSC Health Information

Identification of Need

There is an increasing need for multilingual consumer health information in both visual and audio formats. According to Census 2000 data, over 44 million Americans speak a language other than English at home¹. A 1997 survey found that nearly 10% of all Americans 18 years of age and older experienced vision trouble, even with the aid of

¹ U.S. Census Bureau. Census 2000 Supplementary Survey Summary Tables. AT-02 Profile of Selected Social Characteristics: 2000 Available at http://factfinder.census.gov/servlet/QTTable?ds_name=D&geo_id=D&qv_name=ACS_C2SS_EST_G00_QT02&_lang=en.

corrective lenses². Additionally, the 1992 National Adult Literacy Survey found that over half of respondents born outside of the U.S. could not complete tasks on the most basic English literacy level³. Illiteracy in English and one's own language creates obstacles to health care⁴. Online audio recordings of health information in multiple languages would potentially serve the many people who, because of language barriers, visual impairment, and other obstacles, cannot otherwise access such needed information.

While the resources will be accessible via the Internet, there is demonstrative local need. Within Utah, over 10% of residents belong to a racial minority, according to the 2000 census⁵. 12.5% of Utahns speak a language other than English at home⁶. There also is a substantial population of visually impaired people within the service region. A 1996 survey by the Utah State Bureau of Surveillance and Analysis found that at least 61,300 of state residents experience some visual impairment⁷. Additionally, the 1996 National Health Interview Survey found that over 1.4 million people in the western United States alone are visually impaired⁸.

Identification and Description of Target Population and Geographic Area Covered

Spencer S. Eccles Health Sciences Library

The Spencer S. Eccles Health Sciences Library is the principal health sciences library within Utah and much of the intermountain region. The Eccles Health Sciences Library serves the state's 2.2 million inhabitants, as well as many health professionals, patients, and consumers beyond the state's borders. An increasingly diverse population forms Utah's collective total of inhabitants. As stated earlier, census 2000 findings indicate that over 10% of residents belong to a racial minority⁹. More specifically, 9% of state residents are Hispanic¹⁰. The percent of minority residents increases in urban areas; Hispanic residents comprise over 24% of inhabitants in areas of Salt Lake County¹¹.

However, the Eccles Health Sciences Library's service region extends far beyond Utah and the United States. The proposed project would serve a global audience. The Library envisions this project to reach people throughout the world who are in need of health information audio recordings. Because the recordings will be online, they will be accessible where ever the Internet is present.

The Eccles Library is well equipped to provide online access to patrons. Currently, there

² Centers for Disease Control. "Summary Health Statistics for U.S. Adults: National Health Interview Survey, 1997" *Vital and Health Statistics, Series 10, Number 205, May 2002* page 33, Table 12
http://www.cdc.gov/nchs/data/series/sr_10/sr10_205.pdf.

³ The 1992 National Adult Literacy Survey: Low Literate Adults (Population Diversity Within the Lowest Literacy Level Available at <http://nces.ed.gov/naal/design/lowdiversity92.asp>).

⁴ D J Tuffnell, K Nuttall, J Raistrick, T L Jackson. Use of translated written material to communicate with non-English speaking patients. *BMJ*. 1994 Oct 15; 309(6960):992.

⁵ QuickFacts, <http://quickfacts.census.gov/qfd/states/49000.html>.

⁶ GCT-P11 Language, School Enrollment, and Educational Attainment: 2000. Census 2000 Summary File 3 (SF-3) Sample data

http://factfinder.census.gov/bfi_lang=en_vt_name=DEC_2000_SF3_U_GCTP11_ST2_geo_id=04000US49.html.

⁷ Bureau of Surveillance and Analysis *Overview of the 1996 Health Status Survey* table 27, p. 60-61
http://www.health.state.ut.us/action2000/hssover/OVR_HIGH.PDF.

⁸ "Current Estimates from the National Health Interview Survey, 1996" *Vital and Health Statistics Series 10 Number 200*, October 1999, table 66, p. 103 http://www.cdc.gov/nchs/data/series/sr_10/sr10_200.pdf.

⁹ See footnote 5.

¹⁰ See footnote 5.

¹¹ "2000 Census Report" *Salt Lake Tribune* Tuesday, 13 Aug 2002, A9.

are 167 workstations available for public access to the Internet, and 68 workstations available to staff. Additionally, the Hope Fox Eccles Clinical Library, a branch library of the Spencer S. Eccles Health Sciences Library, provides four public workstations and three staff workstations, all having online access. The Hope Fox Eccles Clinical Library is located in University Hospital, and has a special focus on serving patients, University faculty and staff, and the area community. All computers in both libraries have high speed Internet connectivity. The Eccles Health Sciences Library is equipped with a 100 megabits per second, fiber optic, switched network. The library has a connection to the campus network backbone at Gigabit per second.

Both the Spencer S. Eccles Health Sciences Library and the Hope Fox Eccles Clinical Library possess substantial information resources, while focusing on exceptional customer service in providing health information to patients, consumers, the community at large, and to healthcare professionals. The Eccles Health Sciences Library currently owns 57,985 monograph titles, 115,481 journal volumes, 2357 journal subscriptions, 1,747 audiovisual volumes, and 129 computer software volumes. It maintains a substantial consumer health print collection. The Clinical Library is also assembling a print and multimedia collection geared to patients and consumers. Individual items will address many topics that are important to patients.

The Eccles Health Sciences Library was one of the first major health sciences libraries to establish a Web site (Figure 10). This Web site serves as a portal to a huge array of electronic health information services that have been evaluated by professional health science librarians. In addition to links to the major national resources such as PubMed and MedlinePlus, the Web site links to regional, local and institutional resources. The library subscribes to more than 1502 electronic journal titles, 247 electronic books and 148 electronic reserve courses. The Web site receives more than 14,000,000 hits from more than 600,000 individual visitors each month.



Figure 10 – Eccles Health Sciences Website

Project Objectives

The principle objectives are to

- Record high quality narrations of 200 brochures found on the 24 Languages Website
- Make these recordings available on the Internet, via Website
- Promote the resource throughout the state, region and beyond
- Train health sciences and public librarians to assist patients and patrons with site
- Develop an evaluation program that will contribute to the development of the site

The project will provide audio access to materials that are currently unavailable to the visually disabled or to individuals with literacy deficits in English or a native language. Although there are several online resources that currently provide visual access to consumer-oriented health information (usually in the form of pdf or html files), multilingual information in an audio format is rare. In fact, the director of the 24 Languages Project has found only two to date. The U.K.-based Meningitis Research Foundation at <http://www.meningitis.org/languages/index.html> provides materials in 15 different languages, but has a very limited number of mp3 files. MedlinePlus also provides audio files in English and Spanish within the interactive health tutorials.

This project will dramatically expand and enhance access to quality health materials for individuals who previously had very limited access to online information. Because it will provide such materials in many languages, it will serve the visually disabled and individuals with literacy deficits in English or a native language not just regionally, but worldwide.

Within the Salt Lake City area, there are Hispanic, Pacific Islander, Asian, and other communities that will benefit from the online sound recordings. However, because this will be an electronic resource, the benefits will expand to regional, national and international communities. We plan to work with the MidContinental Regional Medical Library to promote this resource in the region and through the National Networks of Libraries of Medicine. One of the proposed principal investigators is a member of a working group composed of individuals from several Regional Medical Libraries with similar projects and interests. This project will be promoted through members of this group.

Methodology

Expected Outcome: Securing qualified, competent narrators to read brochures aloud.

The principal investigators will locate speakers who are qualified to provide narration. The optimum candidates will be native speakers of the relevant languages who are fluent in both spoken and written communications in their respective first languages. These candidates will ideally have some college

background. The International Center, a resource that serves international students at the University of Utah, has agreed to assist in locating qualified narrators. There is a large pool of potential narrators at the University of Utah. The international students on campus represent 102 nations. Funds from this project will be used to pay these participants to read brochures aloud for recording purposes in the Digital Video Studio at the Eccles Health Sciences Library. This facility is already in place and ready for this process. The narrators will read the brochures aloud in the Digital Video Studio, where these narrations will be recorded and digitized.

Expected Outcome: Producing high quality sound recordings in multiple formats, to be easily accessed through the project Website.

The technician will digitize the recordings to Web accessible formats or downloadable files and made available through the 24 Languages Website. Current formats will include MP3 and WAV. MP3 files can be converted into RealAudio, QuickTime and Windows Media formats for streaming. These formats are currently the most widely accessible because the players are free and available on the Internet. WAV files are a high quality sound format that is best suited for downloading. The recordings will be done in the Eccles Library Digital Video Studio, where all hardware, software and technical staff will be contributed to the project. The technician will load the digital files on the library server and the Website editor will link them to the 24 Languages Website. The files will be produced in multiple formats to allow listeners to hear the file streamed over the Internet, or download the file for local listening. The site will represent the sound files with icons. Users will click the sound icon to hear the digital audio narration of the brochure. Links to the PDF version of the brochure will be also be clearly identified so users can view, read and print the brochure. (See Figure 11 below)

















ARABIC:				
RealAudio Player (Streaming)	QuickTime Player (Streaming)	Windows Media Player (Streaming)	Download Sound File	PDF Document
				Chickenpox
				Hepatitis E
				Hepatitis E
				Measles, mumps, and rubella

Figure 11 – Mock-up of site with sound icons

Expected Outcome: Librarians and healthcare providers trained in using the site. These professionals will use the site to provide information to their clients and will promote the site among the populations they serve.

The principal investigators will carry out training and promotional activities. Training and promotion will primarily be accomplished through collaborative “Train the Trainer” sessions with other organizations. Presentations and workshops will be conducted on-site at public and other libraries, at annual conferences for the collaborating organizations, at the Spencer S. Eccles Health Sciences Library, and on-site at other targeted organizations. Attendees will be introduced to the resource, They will be introduced to concepts such as streaming audio, plus receive instruction on downloading and otherwise utilizing various audio formats, and using utilities such as RealPlayer and QuickTime. The trainers will consult attendees in how to use the resource within each setting represented. Trainers will discuss issues such as installing sound cards, utilizing headphones, providing adequate access to the service while maintaining a quiet atmosphere, and assist groups in customizing each setting to provide access to the audio files. Those who attend the workshop will receive a brief booklet to assist them with utilizing the service. Public libraries and other organizations that serve non-English speaking populations will especially be targeted. These organizations will have first priority for receiving presentations. All public libraries in Utah enjoy robust Internet connectivity through T1 cables. For those accessing the files through modems, Elizabeth Workman has experienced success with accessing other audio files at home via a 56K modem. The primary organizations to receive training and promotional materials are listed in appendix II of this document.

Expected Outcome: High visibility for the resource in the region and beyond. Increased awareness of the Website among librarians and healthcare providers, especially for those who serve non-English speaking populations.

The principal investigators will promote the project, as outlined in the “Publicity/Promotion” portion of this document. The project will also benefit from the public visibility the 24 Languages Website has already established.

Expected Outcome: Develop an ongoing evaluation program.

The project will be continually evaluated, as outlined in the “Evaluation Plan”.

Task Timeline List and Table

Update Outreach Database Record

Locate all narrators

Begin recording

Finish recording

Digitize recordings for Web access

Upload recordings to server and provide links to them on the 24 Languages Website

Begin Training

Begin Promotional efforts

Quarterly Reports

Final Evaluation

Final Report

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	5th Quarter	6th Quarter
Update Outreach Database						
Locate narrators						
Begin recording						
Finish recording						
Digitize recordings						
Upload and add links						
Training						
Promoting						
Quarterly reports						
Ongoing evaluation						
Final report						

The project will be completed within an 18-month period, represented by six quarters. Each quarter will be three months in length.

Evaluation Plan

A comprehensive plan to evaluate the project will include the following components:

- Website usage statistics
- Number of links to the Website
- Feedback from online visitors (online snapshots)
- Feedback from community groups (focus groups and interviews)
- Feedback from libraries

Project staff will assemble Website use statistics quarterly. Staff will note high-use days,

high-use times of day, geographic locations of Website visitors, most frequently accessed audio files, plus the most popular languages and health subjects. Staff will note correlations between promotional efforts and increases in use. Geographic locations of Website users will be monitored, to evaluate training and promotional efforts targeting specific areas. Individual audio file use will be noted to identify especially popular subjects and languages. This information will guide project staff in the future expansion of the project. Staff will prepare reports to be included in each quarterly evaluation.

Project staff will determine the amount of other Websites that have links to the project site. This will serve as another indicator of promotion effectiveness. This will be done quarterly, and the figures will be included in the quarterly and final reports.

Project staff will implement an online form and solicit Web visitors to share their experience of the Website, with structured questions to determine if it improved their health or that of a loved one. The form will also solicit suggestions for improving the resource. These comments will be compiled and sorted by comment type (positive, negative, suggestions), date, and other characteristics relevant and useful to the project. The comments will aid staff in continually improving the Website. Staff will compile and include them in each quarterly evaluation.

Project staff will solicit feedback from community groups that stand to benefit from the resource. Staff will assemble focus groups and compile reports of their findings. If needed, focus groups will have a bilingual facilitator, provided by the community groups. The findings will be included in the quarterly evaluations.

Project staff will gather feedback from healthcare facilities, governmental offices and other libraries. The organizations that receive training and promotional materials will be a prime source for this sort of feedback. Project staff will contact organizations six months to a year after training to determine if more training is needed. Staff will also contact organizations that received promotional materials for follow-up data, and to determine if an organization desires on-site training or more promotional materials. All the feedback from these sources will be assembled and analyzed and will aid staff in improving the Website. This feedback will be included in the quarterly evaluations.

Publicity/Promotion

The sound recordings would be promoted through several activities, including:

- Workshops at public libraries
- Presentations to community groups
- Promotional literature distributed to area clinics and health departments
- Related listservs and Websites
- Presentations to professional organizations such as the Medical Library Association and state library associations, at their annual conferences and other events
- Press releases to regional media, with a focus on media serving ethnic groups

Project staff will schedule workshops and presentations to be held at public libraries throughout Utah. Promotional materials will be made available at these events, in

addition to being generally available to anyone interested in using or promoting the resource. A detailed list of public libraries to receive workshops is included in the appendix.

Project staff will schedule presentations with community organizations that will benefit from the service. Examples of such organizations include the International Center, which serves University of Utah students who are from other countries, similar students resources at the University of Utah and other academic institutions in the region, Centro Civico Mexicano, and the Utah chapter of REFORMA, the National Association to Promote Library and Information Services to Latinos and the Spanish Speaking.

Presentations and announcements will be made to health clinics and departments of health within the region. Presentations will include training in using the Website. Presentations and announcements will also be made to regional professional organizations for healthcare providers, such as the Utah Medical Association. A detailed list of clinics, departments of health, and professional organizations to receive presentations and training is included in appendix II.

Announcements will be posted to relevant listservs. These announcements will include a description of the project, a short list of example audio recordings, and the URL.

Project staff will schedule workshops, poster presentations, and paper presentations to be held at library organization conferences and other meetings. These organizations will include the Utah Library Association, the Medical Library Association, and others. Training will also be provided to the Utah State Library Division Services for the Blind.

Press releases and other similar announcements will be sent to the local media, with an emphasis on media that serve various ethnic communities. Examples of this would be *Mundo Hispano*, *Venceremos*, and other Hispanic newspapers, Hispanic radio and television, and other media serving diverse communities, such as *Eastern Trends* and *Utah Vietnamese News*. Press releases will be prepared in the language that is most appropriate for each publication.

The 24 Languages Website has already received much positive publicity through the local media and professional publications. KSL television, the area affiliate for NBC, aired a very positive segment on the Website. This segment was also broadcast in San Francisco. Local newspapers and newsletters such as *The Salt Lake Tribune*, *The Deseret News*, *The IAIMS Newsletter*, and others have featured articles alerting readers to the Website. Forthcoming issues of the *Journal of Hospital Librarianship* and *Healthcare on the Internet* will include articles outlining the 24 Languages Website. The sound recordings would automatically benefit from this existing publicity.

Personnel (all who are involved as outlined in objectives and methodology)

Principal Investigators

Both principal investigators will locate qualified narrators. As stated earlier, the International Center will assist in this task. Nancy Lombardo will oversee the recording and digitization process. Elizabeth Workman will act as the Website editor by adding links to the audio files and otherwise developing the site. Elizabeth Workman will also

be responsible for training and promotion. She will work with other library faculty to accomplish the project's training and promotional goals, as outlined in the "Facilities/Institutional Support" section.

Narrators

Native speakers who are fluent in oral and written communications will read aloud the relevant foreign language brochures. They will be compensated on a per document basis.

Technician to Record and Digitize Narrations

The technician, Jeremy Smith, will record and prepare narrations for online access. The technician will digitize the files in mp3 and other streaming and downloadable formats so they are ready to be linked from the Website. Jeremy Smith has extensive experience with digital sound production and is currently employed in the Eccles Health Sciences Library Digital Video Studio.

Facilities/Institutional Support

The Spencer S. Eccles Health Sciences Library has the equipment and facilities to produce the sound recordings. The library's Digital Video Studio is a state-of-the-art facility. Since the library already has all the needed equipment and software, no funds will be needed for purchasing such items.

Additionally, the Eccles Library has a history of providing electronic resources, while possessing the expertise to make such projects truly successful. As stated earlier, the library has been producing digital video and audio resources for more than two years. The resources produced to date include live seminar broadcasts, on-demand graduate level nursing courses, and curriculum supporting materials in a variety of health related subjects. The library has also provided electronic document delivery services to 9 institutions in 5 countries outside of the U.S. since 1999. Eccles Library has provided digital library services for the national health libraries in Cyprus since 1999, building and indexing a virtual library of Cypriot health literature.

Molly Youngkin, Jeanne Le Ber, and other library faculty members will include the project as part of their outreach efforts. Molly Youngkin, the outreach librarian will include the resource in the curriculum she provides to students and health professionals throughout the state. Jeanne Le Ber, the education librarian, will include the resource in the relevant courses that she teaches. She will also work with the principal investigators in integrating the project with presentations and workshops taught by all library faculty. For example, the project will be incorporated into the course entitled "Finding Reliable Health Information Online", which is taught at multiple libraries.

The Eccles Library has several existing partnerships with other organizations that will contribute to the project's success. The library has partnered with the Utah Library Association (ULA) to create the Utah Consumer Health Network (UCHIN). UCHIN was one of the first online resources to combine pre-evaluated health information with local community services. The 24 Languages Website is already a significant component of UCHIN, and is found within its multilingual sections. The UCHIN Website URL is <http://uchin.med.utah.edu>. Several Eccles Library faculty belong to the Health Round Table (HEART), a component of the Utah Library Association. Library faculty regularly contribute workshops and presentations at the ULA annual meeting and fall workshops

through which this project can be promoted.

The Eccles Health Sciences Library is an active member of the Utah Academic Library Consortium (UALC). Faculty of the Eccles Health Sciences Library serve on many UALC committees and provide leadership and innovation for state wide projects and collaborations between academic institutions. Because Utah is a large state with a relatively small population, UALC member institutions routinely share resources. UALC will provide a statewide mechanism for promoting the 24 languages audio project.

Another state consortium that will have interest in this project is the Utah Health Sciences Library Consortium (UHSLC). This group is composed of hospital, academic and corporate libraries in the health sciences. UHSLC was established through the leadership of Eccles Health Sciences Library faculty. Eccles faculty continue to contribute substantially to the activities of the consortium. A cooperative cataloging service has been established utilizing the Eccles Library online catalog. Resources are shared among members. Faculty provide presentations to enhance professional development of the members. These libraries have access to many non-English speaking patients who would benefit from this audio project.

This project can be incorporated into outreach services provided by the MidContinental Regional Medical Library (MCRML), which is located at the Eccles Health Sciences Library. This RML has liaisons in each of the six states represented by the region. These liaisons provide outreach within their assigned states. The principal investigators will promote the resource to the liaisons and encourage them to incorporate it into their presentations. Additionally, the RML liaisons will be asked to disseminate information about the project to the other Regional Medical Libraries in the National Network of Libraries of Medicine. This will provide national awareness of this resource.

The need for these audio files is clearly not limited to the local population or the regional population. The need is national and global. The Eccles Library will also utilize its international contacts to promote the service.

Continuation of Activities After Project Completion

After completion, the proposed project would still be supported through several specific activities. Project staff will continue to train users and promote the resource. Staff will continually monitor sound quality, regularly check link viability, and analyze the resource for potential improvement on a regular basis. The library will continue to solicit feedback and otherwise evaluate the resource throughout the lifetime of the Website.

The project will continue to be incorporated into library outreach activities. Molly Youngkin and other faculty members will include the resource in their presentations, classes, and other outreach activities.

The project will serve as a pilot for other similar endeavors. Project staff will note problematic issues, discovered solutions, and otherwise what was learned through completing the project. Staff will share this information with other projects, and the library and health sciences communities at large.

The Eccles Library is committed to sustaining this project and will maintain the Website

and audio files. The library will expand the collection as opportunities arise, and seek out appropriate materials to add to it, guided by usage statistics, focus group findings and other feedback. As community groups become involved and excited about the project, they will be encouraged to provide volunteer narrators to produce future audio files.

Other NLM or NN/LM Support

- NN/LM MidContinental Region contract – N01-LM-1-3514
The Regional Medical Library for the MidContinental Region is headquartered at the Eccles Health Sciences Library.
- Information Systems Grant – Proposed Digital Nero-Ophthalmology Collection - pending

Appendix I
Languages Currently Represented in Materials
Available on the 24 Languages Website

Arabic
Armenian
Cambodian
Chinese
Croatian
Farsi
French
German
Haitian Creole
Hmong
Japanese
Korean
Laotian
Portuguese
Romanian
Russian
Samoan
Serbo-Croatian
Somali
Spanish
Tagalog
Thai
Tongan
Vietnamese

Appendix II Training and Promotion

The following organizations will be targeted for training and promoting the project:

Professional Meetings

The Utah Library Association Annual Conference, May 7-9, 2003
South Towne Exposition Center
Sandy, UT

The Medical Library Association Annual Conference, May 2-7, 2003
San Diego, CA

The Utah Health Sciences Library Consortium

Medical Library Association MidContinental Chapter Annual Conference, 2003

All Public Libraries throughout Utah

MidContinental RML Members

All MidContinental RML Liaisons

Professional Organizations

Utah Medical Association

Utah Nurses Association

Utah Public Health Association

Government Offices

Centro de Buena Salud, Utah Migrant Health Program

Utah Minority Human Services Task Force

Utah State Asian American Advisory Council

Utah State Office of Hispanic Affairs

Utah State Office of Pacific Islander Affairs

Utah Department of Health

12 regional Utah Health Department Offices

Health Clinics

4th Street Homeless Clinic

South Main Medical Clinic

Community Groups

Asian Association of Utah

Centro Civico Mexicano

Hispanic Association of Utah

Cache Hispanic Community

National Hispanic Council of Aging (Salt Lake City Office)

National Tongan-American Society (Salt Lake City Office)

Polynesian Association of Utah

REFORMA de Utah

Utah Coalition of La Raza

Utah Hispanic Women's Association

Regional Media Serving Ethnic Communities

Mundo Hispanico

La Prensa

Eastern Trends

Radio Unica

Radio Fiesta

KSVN Radio

KSVN Television

Telemundo Television

Utah Vietnamese News

Venceremos

The Deseret News

The Salt Lake Tribune

Ogden Standard-Examiner

The Daily Herald (Provo, UT)

The Wendover Times